AN ELECTROSURGICAL SYSTEM

ABSTRACT

An electrosurgical system comprises a radio frequency generator (1), an electrosurgical instrument (El), and a fluid enclosure (42). The generator (1) has a radio frequency output for delivery of power to the electrosurgical instrument (El) when immersed in an electrically-conductive fluid. The electrosurgical instrument (El) has an electrode assembly (32) at the distal end thereof, the electrode assembly comprising a tissue treatment electrode (34), and a return electrode (38) axially spaced therefrom in such a manner as to define, in use, a conductive fluid path that completes an electrical circuit between the tissue treatment electrode and the return electrode. The fluid enclosure (42) is adapted to surround an operation site on the skin of a patient or an incision leading to a cavity surgically created within the patient's body. The fluid enclosure (42) includes sealing means (44) for sealing against the patient's tissue, and the fluid enclosure includes at least one port *(50a,* 52a) through which the electrosurgical (El) is insertable, and through which the electrically-conductive fluid can enter and/or leave the enclosure. The fluid enclosure device of the present invention can also be used to treat tumours within the colon. The enclosure, which includes a proximal and a distal bung, is inserted into the colon in a deflated condition and then inflated with a conductive fluid or gas. The colon can be supported against the pressure of the fluid or gas with a pressure sleeve that has been inserted to surround the region of the colon being treated. An electrosurgical instrument is then inserted into the colon and manipulated to vaporise the tumour.